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ORIGINAL RESEARCH

Informed consent for peripheral nerve blocks at a tertiary level hospital in South Africa: a quality improvement project

Appendices

Appendix 1

ANAESTHETIC CONSENT FORM

HOSPITAL STICKER

DEPARTMENT OF ANAESTHESIA & PERIOPERATIVE MEDICINE
UNIVERSITY OF CAPE TOWN

Planned procedure:

Planned Regional Anaesthesia technique:

Benefits	:	1.	☐
		2.	☐
		3.	☐

Common complications:	1.	☐
	2.	☐
	3.	☐

Rare complications:	1.	☐
	2.	☐
	3.	☐

Very rare complications:	1.	☐
	2.	☐
	3.	☐

Alternatives:	☐

Patient informed of right to refuse:	Y / N

Patient gives consent for above mentioned block:	Y / N

Dr: Date: _____

_____

Appendix 2

Upper limb nerve block information sheet

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	Interscalene block	
	Supraclavicular block	
	Infraclavicular block	
	Axillary block	
	Distal peripheral block	

An upper limb nerve block (regional technique) can be given for one of the following possible reasons:

1. As anaesthesia for your orthopaedic operation of your arm or hand.
2. As pain relief after your orthopaedic operation of your shoulder, arm or hand.

This nerve block is administered through an injection of local anaesthetic at the side of the neck between the interscalene muscles, just above/below the clavicle (collar bone) or at the upper arm. This is a very safe and effective method of pain relief for the shoulder, arm or hand. The block is administered by your anaesthetist who uses special techniques, needles and equipment, which may include an ultrasound machine and/or a nerve stimulator to determine the precise location of the nerves. The bundle of nerves that supply the shoulder, arm and hand originates in both sides of the neck. We sometimes block individual nerves lower down the arm. You can expect to experience complete/partial numbness of the affected limb/area for a period of 8-12 hours, but the duration differs for each patient and can be as long as a day. If you are booked for shoulder surgery please remember to tell your anaesthetist if you chronically experience pins and needles or pain in any part of the arm or hand.

Please ask the anaesthestist during the pre-operative visit to clarify any uncertainty you may have. *It is your right to refuse consent to a regional procedure.*

Anaesthetists exercise extreme care in administering upper limb nerve blocks but, as with any medical procedure, complications can occur. The following complications are possible:

Common complications:

3. Motor block: While we intend to block only the pain fibres we inadvertently also block the fibres that control movement. Your arm will most likely feel heavy or lame when you wake up from anaesthesia. Please do not hang your arm from the side of the bed as this can cause permanent nerve damage.
4. Horner syndrome: This happens generally when the other nerves in the area are also blocked. Commonly we see on the side of the block, a drooping eyelid, a blocked nose, small pupil, dry cheek, hoarse voice and sometimes shortness of breath in which case we send you to the ward with some oxygen. As the block wears off, these symptoms will disappear.
5. Failed block: It is possible that the block fails due to mechanical reasons or local factors in your neck or previous neck surgery. Therefore the block will provide insufficient pain relief and alternative pain methods will be employed.

Rare complications:

1. Haematoma: Because there are a few large blood vessels in that area of the neck, it is possible that one of them can be punctured while performing the block and there is a small chance that a haematoma (blood clot) can be formed.
2. Local discomfort: Sometimes it is necessary to go through some of the neck tissue to reach the nerves and this can cause some local discomfort afterwards but it is of short duration.

Very rare complications:

1. Intravenous administration: There is a small risk that the local anaesthetic can be injected directly into the bloodstream which can lead to convulsions or heart dysrhythmias. Extreme care is exercised to prevent this complication.
2. Pneumothorax: Because the lung is situated close to the area of injection, it is possible that it can be punctured. In case of this unlikely event you will experience shortness of breath and intense chest pain, especially when breathing. An underwater tube will be placed in your chest to help you breathe.
3. Spinal or epidural: The spinal cord is also close to the area of injection and if a spinal or epidural space is accidentally injected, it can cause temporary lameness.
4. Sepsis: Although we use an aseptic technique, the possibility of a surface infection or abscess exists.
5. Nerve damage: This is possible through the insertion of the needle but is unlikely with the use of ultrasound and/or nerve stimulator.
6. A few other extremely rare complications have also been documented in literature.

Lower limb nerve block information sheet

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Psoas comp. block	
Femoral block	
Lat. femoral cut. block	
Saphenous block	
Obturator block	
Sciatic block	

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A lower limb nerve block (regional technique) can be given for one of the following possible reasons:

1. As anaesthesia for your orthopaedic operation of your hip, leg or foot.
2. As pain relief after your orthopaedic operation of your hip, upper leg, knee, lower leg, ankle or foot.

Although the most common method for regional anaesthesia of the lower limb is a spinal or epidural (neuraxial techniques), there is a place for the use of the lower limb nerve block. This is a very safe and effective method of pain relief and may require multiple injections, with the added benefit of avoiding a total sympathectomy associated with the neuraxial techniques. These blocks are administered through an injection of local anaesthetic in the groin, through or below the buttocks, behind the knee joint or around the ankle depending on the type of lower limb nerve block and if it is administered alone or in combination. The block is administered by your anaesthetist who uses special techniques, needles and equipment, which may include an ultrasound machine and/or a nerve stimulator to determine the precise location of the nerves. The nerve supply to the lower limb includes two big components, namely femoral and sciatic nerves. We sometimes block individual nerves lower down the leg. You can expect to experience complete/partial numbness of the affected limb/area for a period of 8-12 hours, but the duration differs for each patient and can be as long as a day.

Please ask the anaesthetist during the pre-operative visit to clarify any uncertainty you may have. *It is your right to refuse consent to a regional procedure.*

Anaesthetists exercise extreme care in administering lower limb blocks but, as with any medical procedure, complications can occur. The following complications are possible:

Common complications:

1. Motor block: While we intend to block only the pain fibres we inadvertently also block the fibres that control movement. Your leg will most likely feel heavy or lame when you wake up from anaesthesia.
2. Failed block: It is possible that the block fails due to mechanical reasons or local factors like obesity or previous surgery. Therefore the block will provide insufficient pain relief and alternative pain methods will be employed.

Rare complications:

1. Haematoma: Because there are a few large blood vessels in the area, it is possible that one of them can be punctured while performing the block and there is a small chance that a haematoma (blood clot) can be formed. The presence of a venous graft or previous replacement surgery is a relative contra-indication for a block in the same area.
2. Local discomfort: Sometimes it is necessary to go through some tissue, like that of the buttocks to reach the nerves and this can cause some local discomfort afterwards but it is of short duration.

Very rare complications:

1. Intravenous administration: There is a small risk that the local anaesthetic can be injected directly into the bloodstream which can lead to convulsions or heart dysrhythmias. Extreme care is exercised to prevent this complication.
2. Sepsis: Although we use an aseptic technique, the possibility of a surface infection or abscess exists.
3. Nerve damage: This is possible through the insertion of the needle but is unlikely with the use of ultrasound and/or nerve stimulator.
4. A few other extremely rare complications have also been documented in literature.

Spinal information sheet

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A spinal injection can be given for one of the following possible reasons:

1. As the method of anaesthesia for your caesarean section with the following benefits: you are awake to experience the birth process, you have a smaller risk for airway problems as well as a longer period of pain relief after the operation.
2. As anaesthesia for an orthopaedic operation.

Spinal injections are a safe and very effective way to give anaesthesia. They are administered by an anaesthetist who will also explain the technique to you. Please ask the anaesthetist during the pre-operative visit to clarify any uncertainty you may have.

In short, the procedure is as follows: local anaesthesia is injected in a sitting position before administering the spinal injection. This causes a burning sensation lasting a few seconds. Hereafter the spinal injection is administered. Please note that you should not move at all during this injection, because movement furthers the risk for complications. At this stage you will be asked to lie down on your back. A warm and heavy sensation will move upwards from your feet towards your waist. Most of the time both legs feel heavy and can hardly be moved. This will last for a few hours. Touch and pull sensation (i.e. deep pressure sensation) will still be present, but the spinal blocks all pain impulses.

Anaesthetists exercise extreme care in administering spinals, but, as with any medical procedure, complications can occur. The following complications are possible:

Common complications:

1. *Cardiovascular*: Your blood pressure may drop and you may feel lightheaded, dizzy or short of breath. It is easy to treat this quickly and effectively.
2. *Nausea:* Is very common, especially if your blood pressure drops and is also easily treated.
3. *Shivering*
4. *Itching:* Especially in the face and is a reaction on the medication used in the spinal.
5. *Difficulty in passing urine*: Patients who have had a spinal are not permitted to leave the hospital before they are able to pass urine. In case of a spinal caesarean section a catheter is placed in advance so you needn't be worried.
6. *Hot flushes, palpitations and fleeting headaches*: During the caesarean, the mother is injected with a drug that helps the uterus to contract after the baby is delivered, this causes hot flushes and a headache, but is of short duration.

Rare complications:

1. *Failed block*: It may happen that the block fails because of mechanical and local factors in your back for e.g. obesity, previous back operations or congenital narrow spaces. This results in insufficient pain relief and the injection can be repeated at a different level or general anaesthesia can be employed.
2. *Headache*: In spinal anaesthesia the outer covering of the spinal cord is always punctured and spinal fluid can leak through the defect caused. This can lead to headache. Young pregnant women are at higher risk to develop a post dural puncture headache but nowadays a very thin needle is used to minimize fluid leakage. To counterfeit this complication, the following measures can be taken: a) strict bed rest for 8 hours postoperative, b) to increase oral fluid intake and c) to increase caffeine intake. If you are breastfeeding, take the caffeine directly after a feed in which case it will be worked out before the next feed. We treat this headache with bed rest and pain medication for 2-3 days. If it is not resolved by this time we can, under sterile conditions, inject some of your own blood into the epidural space to seal off the leakage. This helps in 97% of cases within a few hours.
3. *Backache*: To reach the spinal space the needle penetrates ligaments and soft tissue in the back and you may suffer superficial pain of variable duration at the injection site.

Very rare complications:

1. *Haematoma* (blood clot): Small blood vessels can be damaged during insertion of the spinal needle. In rare cases this can cause continuous internal bleeding. The resultant pressure on the spinal cord can lead to neurological damage and paralysis if not diagnosed and treated timeously. This treatment involves urgent surgical drainage of the haematoma after confirmation with a MRI scan of the back. It is important that the attending anaesthetist is made aware of any medication, including herbal products, that you are taking and that may interfere with blood clotting and thus may increase the risk of a spinal haematoma forming.
2. *High Spinal block*: If the local anaesthetic spreads too far up in the spinal canal, it can cause a high block that temporarily paralyzes the arms and the muscles of breathing.
3. *Sepsis*: In spite of the strict aseptic techniques used, superficial skin infections or even an abscess close to the spinal cord are possible.
4. *Neurological damage*: This can occur during insertion of the spinal needle. If any extreme pain or discomfort during the procedure is experienced, the anaesthetist must be informed immediately.
5. A few other extremely rare complications have also been documented in the literature.

Epidural information sheet

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An epidural injection can be given for one of the following possible reasons:

1. On the recommendation of a spinal surgeon or neurologist in the management of back complaints.
2. To manage post-operative or labour pain.

A computerized infusion pump that continuously supplies the local anaesthetic drug via an epidural catheter can also be used in the long term management of pain.

Epidural injections are safe and very effective in controlling pain. They are administered by an anaesthetist who will also explain the technique to you. Please ask the anaesthetist during the pre-operative visit to clarify any uncertainty you may have.

Anaesthetists exercise extreme care in administering epidural injections and infusions but, as with any medical procedure, complications can occur. The following complications are possible:

Common complications:

3. *Cardiovascular*: Your blood pressure may drop and you may feel lightheaded or dizzy. It is easy to treat this quickly and effectively.
4. *Nausea:* This is also easily treated.
5. *Shivering*
6. *Difficulty in passing urine*: Patients who have had an epidural are not permitted to leave the hospital before they are able to pass urine. Occasionally patients require a urinary catheter and have to be kept in hospital overnight. Patients with an epidural catheter for a constant infusion usually have their bladders catheterized until the epidural is stopped.

Rare complications:

1. *Failed block*: In rare cases the epidural injection may give unsatisfactory pain relief. The dosage of epidural drugs can then be adjusted or alternative methods of pain relief can be employed.
2. *Headache*: In some cases the outer covering of the spinal cord is inadvertently punctured and spinal fluid can leak through the defect caused. This can lead to headache which can respond to bed rest for a few days. If this is not effective a sample of your own blood can be withdrawn and injected aseptically into the space around the spinal cord to stop the leak.
3. *Backache*: You may suffer superficial pain of variable duration at the injection site.
4. *Prolonged or dense block*: We strive to give the minimum amount of local anaesthetic needed to provide satisfactory analgesia without interfering with limb movement. However, sometimes a block can have a prolonged or even a temporary paralyzing effect.

Very rare complications:

1. *Haematoma* (bleeding): Small blood vessels can be damaged during insertion of the epidural needle. In rare cases this can cause continuous internal bleeding. The resultant pressure on the spinal cord can lead to neurological damage and paralysis if not diagnosed and treated timeously. This treatment involves urgent surgical drainage of the haematoma. It is important that the attending anaesthetist is made aware of any medication, including herbal products, that you are taking and that may interfere with blood clotting and thus may increase the risk of a spinal haematoma forming.
2. *Spinal block/high block*: If the unlikely event of the injected local anaesthetic entering the spinal fluid a very dense block that temporarily paralyzes the arms and the muscles of breathing can occur.
3. *Sepsis*: In spite of the strict aseptic techniques used, superficial skin infections or even an abscess close to the spinal cord are possible.
4. *Neurological damage*: This can occur during insertion of the epidural needle or catheter. Any undue discomfort during the procedure must be communicated to the anaesthetist immediately.
5. Rarely during removal of the epidural catheter it can be sheared off with a piece being retained in the epidural space. This may require surgical removal.
6. A few other extremely rare complications have also been documented.

Appendix 3

DEPARTMENT OF ANAESTHESIA & PERIOPERATIVE MEDICINE
UNIVERSITY OF CAPE TOWN

Peripheral Nerve Block informed consent information

General Complications

Common:

Motor Block

Failed block

Rare

Haematoma – small chance

Local discomfort (Due to going through soft tissue, usually short duration)

Very Rare

IV administration - LA toxicity (convulsions, dysrhythmias)

Sepsis – surface infection or abscess

Nerve damage – temporary or permanent

Block specific complications

Supraclavicular

Pneumothorax

Interscalene

Horner's syndrome

Ipsilateral diaphragmatic paralysis

Alternatives

Other regional techniques

IV analgesia administration

Inform patient of right to refuse block and that refusal will have no impact on surgery